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TEMPLE UNIVERSITY SCHOOL OF DENTISTRY  
**Department of Oral and Maxillofacial Pathology,  
'Medicine and Surgery**

Dental Gerontology  
Summer 2007

Course Director:  
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Tuesday, Wednesday, Friday 8 – 8:50  
Timmons Hall

**Final Examination**

Mr. B., a 63-year-old African American, presents as a new patient for comprehensive dental care. He has a partial dentition consisting of 18 teeth. Upon initial examination, you determine that Mr. B has nine teeth with intra-coronal restorations and three full coverage crowns. Six of the teeth restored with intra-coronal restorations have recurrent caries and you observe five root surface caries.

Questions 1-5 relate to Mr. B:

Question 1. How would you rate Mr. B's caries susceptibility?

- ☒ A. High
- B. Medium
- C. Low
- D. Unable to determine with the information provided.

Mr. B takes the following medications: Hydrochlorothiazide (HCTZ) 20mg/day, Corgard 20mg/day, and Lipitor 40 mg/day. Mr. B's blood pressure was 152/89 RAS. He complains of difficulty walking on certain days (when it rains) and has difficulty reading a newspaper (with glasses).

Question 2. Mr. B does not complain of a dry mouth when questioned. Upon examination you notice that the mucosa appears "varnished" and the saliva is thick and frothy. Is this finding significant and if so why?

- ☒ A. It is significant. You should approach this patient as though he has Xerostomia and begin preventive measures appropriately.
- B. It is significant. The signs and symptoms are not significant enough to begin any interventions now; however, you should be alerted to possible impact of Xerostomia in the future.
- C. It is not significant. The patient does not complain and in the absence of subjective symptoms, no intervention is indicated.
- D. It is not significant. Many older patients have caries. Younger patients have been exposed to fluoride and demonstrate lower caries activity rates.

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Question 3. Using the OSCAR assessment, how would you rate Mr. B's Systemic Assessment?

- A. Mr. B is a Type 1 patient with controlled medical conditions.
- ☒ B. Mr. B is a Type 2 patient with moderate medical conditions.
- C. Mr. B is a Type 2 patient. His blood pressure and high cholesterol require a written medical consultation.
- D. Mr. B should not be treated in the dental office until a full written medical consultation is obtained from his physician.

Question 4. Considering Mr. B is 63 years old, would you consider placing crowns on Mr. B's teeth?

- ☒ A. No. A 63-year-old patient is too old to place crowns on teeth. This type of treatment plan is considered excessive and inappropriate.
- ☐ B. Yes. All teeth that require extra-coronal restorations should be appropriately treatment planned.
- C. Not enough information provided to make a defensible decision.

Question 5. Which of the following are important considerations for Mr. B?

- A. normative age changes,
- B. the patient's diagnosis,
- C. the patient's pharmacologic regimen
- D. the dentist-physician interaction.
- ☒ E. All of the above

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Mrs. Harriet Jones, a 63-year-old African American female presents to your dental office as a new patient for comprehensive dental care.

SX (Social History): Mrs. J is married to Mr. James Jones for 41 years. She and her husband live in a single family home on the 3200 block of Oganz Street. Mrs. J is employed in the home as a Homemaker. Mr. Jones is a professor (with tenure) of literature at Beaver College (now known as Arcadia University). She has two adult children Betty, age 44, married to an Ophthalmologist with two children, and James Jr. James Jr. is 34, single and moves back home in-between jobs (he is a CPA, but "has trouble with bosses.")

HX (Medical History): Mrs. J has a significant medical history as follows:

1. Two uncomplicated hospitalizations for childbirth.
2. One hospitalization at age 59 for a hysterectomy.
3. Mild Hypertension —
4. Osteoarthritis —
5. Type II Diabetes —

Medication History:

1. Estrogen Replacement Therapy daily
2. Vasotec 10 mg daily,
3. Glucophage 10 mg daily
4. Tylenol/Motrin prn (as needed for pain)

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Dental Examination:

1. Intact dentition consisting of 28 teeth. Most of the posterior teeth have alloy restorations.
2. Periodontal evaluation reveals Mild to Moderate generalized adult periodontal disease with generalized 4-5 mm pockets in the posterior quadrants with localized areas of bleeding on probing.

Chief Complaint (CC): "I broke a tooth on the bottom right in the back."

Question 6: After reading her medical/dental/social histories, you realize that Mrs. J has had good dental care for her entire adult life. She lives in the northern section of Oganz Avenue and your practice is in Jenkentown. True, your office is only 15 minutes away from her house but she passes 10 qualified dentists to come to you. Choose the most correct answer.

- A. It is inappropriate to ask Mrs. J why she left her previous dentist and wants to become your patient.
- B. Who cares why she left her other dentist, she has good dental insurance through her husband's work and needs some crowns.
- C. Ask Mrs. J why she left her previous dentist and ask specifically who her other dentist was. It is always interesting to get some "inside information" on your competition.
- ☒ D. It is important to find out why Mrs. J left her previous dentist. If you can find this information out it may help you not to make the same mistake.

Question 7: Mrs. J has a medical history significant for diabetes, arthritis and hypertension. Choose the most correct answer.

- A. This medical history is complex and you should be reluctant to prescribe complex treatment (i.e. full crowns).
- ☒ B. Although Mrs. J's medical history is significant, she appears to be well controlled and you can feel comfortable prescribing the "optimal" care for her.
- C. Diagnose the insurance coverage and maximize the return to the office.
- D. Mrs. J's medical history is insignificant and should play no role in developing an appropriate treatment plan.

Question 8: With respect to Mrs. J's age (63):

- ☒ A. Chronologic Age is never a factor in a treatment plan.
- B. Sixty-three is too old for a patient to need a crown.
- C. Sixty-three is not too old for a patient to receive a crown.
- D. Chronologic Age is one consideration in developing an appropriate treatment plan.

Question 9: Mrs. J is obviously "at risk" for failure of her restorations. After all, tooth #30 had a MOD alloy restoration that failed. From a preventive perspective. Choose the most correct answer.

- A. It is appropriate to evaluate Mrs. J from a preventive perspective. This may include the prescription of fluoride to enhance remineralization.
- B. Fluoride is only for children and should not be prescribed for geriatric patients.
- C. Geriatric patients should be thoroughly evaluated to determine if fluoride is an appropriate pharmacologic agent. Additional analysis should include prescribing the appropriate type of fluoride (stannous, acidulated phosphofluoride or neutral sodium fluoride).
- ☒ D. A and C
- E. All of the above

Question 10: Upon examination tooth #30 does not have any recurrent decay. You examine all of Mrs. J' teeth and see similar restorations in all four posterior quadrants. Choose the most correct answer.

- A. It is appropriate to prescribe full coverage for posterior teeth with similar restorations. After all, if one tooth fractured, the others might.
- B. It is inappropriate to prescribe full coverage for posterior teeth with similar restorations. You can restore any teeth that fracture when the incident occurs.
- C. Do not prescribe too much dental care or you might scare Mrs. J away from your practice.
- ☒ D. Advise Mrs. J that she has similar types of restorations in many posterior teeth. Ask her preference regarding restoring these teeth. She may elect to restore them at this time and avoid any further possibility of fracture. She may elect to defer any treatment that is not necessary at this time.

Japan has the fastest growing percentage increase in the aging population of all industrialized countries. The percentage increase between the years 1994 – 2010 is just over 100%. Singapore has the fastest growing percentage increase in the aging population of the non-industrialized nations at just over 200%. By way of comparison, the United States expects a percentage growth rate increase of just over 60%.

Question 11: With respect to public policy, which nation (Japan or Singapore) will need to resolve issues that are most likely to parallel the United States, and therefore provide useful experiences for American legislators?

- A. Singapore. This nation has the fastest growing percentage of aging persons. They will, by necessity, need to adjust public policy to accommodate to the demands placed on society.
- B. Singapore. This nation has the economy to fund issues that affect the aging population.
- C. Japan. This nation's economy is most like the United States. The rich tradition of respect for elders influences public policy.
- ☒ D. Japan. This nation's economy is subject to world market forces similar to the United States. With the recent slowing of world economies, the Japanese Parliament is facing challenges similar to those faced by the congress of the United States.

The percentage increase in growth rate of aging patients (60%) that is projected in the United States will impact on the way you practice dentistry. Please evaluate the following answers and their justifications.

Question 12: The majority of patients that require restorative dental procedures in the United States are mature and aging adults. This circumstance is due in large part to the impact that fluoride has on the population. Younger patients who are exposed to fluoride for a longer time tend to have fewer dental caries.

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- ☒ A. True
- B. False

Question 13: With respect to the restoration of teeth of healthy aging patients:

- ~~A. I expect to place a high percentage of initial restorations in teeth that have not previously been restored.~~
- B. I expect to place a low percentage of Crowns and Extra-coronal restorations on teeth of aging patients.
- ☒ C. I expect to replace a high percentage of intra-coronal restorations in the teeth of aging patients (re-restoration).
- ~~D. I do not expect to place a large number of restorations in the teeth of aging patients due to good oral hygiene, compliance with recommended recall intervals, and the effect of fluoride.~~

Question 14: With respect to scheduling of geriatric patients:

- A. Most seniors continue to work and therefore have busy schedules that limit availability for dental appointments.
- B. Most aging patients are ill and cannot come to the dental office easily.
- ☒ C. Most geriatric patients have time available during the middle of the day when most dental practices are slow.
- D. Most aging patients prefer early morning or late afternoon appointments.

Question 15: With respect to trends of edentulism (select the correct answer):

- ☒ A. Edentulism affects more geriatric patients today than in 1950.
- ☐ B. General dentists can expect to make more full and partial dentures as the growth rate of aging patient's increases during the first 30 years of 2000.
- C. Edentulism is at its lowest point in dental history and the trend is that this decline will continue for the next 20 years.
- D. The demographic trends in poverty of aging in the United States will affect the financial viability of dental practices in urban and suburban communities.

Question 16: The periodontium of the older patient can show a variety of inflammatory and degenerative states. Contemporary literature that focuses on tooth loss patterns of older adults frequently named periodontal disease as a major cause of tooth loss in older patients.

- ☒ A. True
- B. False

Question 17: Out of respect for a patient's autonomy, third parties should only become involved with the patients express permission or in situations in which the patient is unambiguously unable to comprehend the proceedings and express her/his wishes.

- ☒ A. True
- B. False

Question 18: Teeth and Restorations: A lifetime of secondary dentin deposition, often exaggerated by caries, occlusal or incisal wear, cervical abrasions, of the placement of multiple restorations results in teeth that have smaller pulp chambers.

- ☒ A. True
- B. False

Question 19. Teeth with multiple restorations in aging patients are less responsive to stimuli and have less dentinal porosity.

- ☒ A. True
- B. False

Question 20. Teeth in aging patients are increasingly brittle and probably have a diminished capacity to mount a defensive odontoblastic response to pulpal exposure.

- ☒ A. True
- B. False

21. If we define the older market as people aged 50 and older, then one in four Americans presently belongs to this group.

☒ A. T  
B. F

22. Which of the following age groups is growing the fastest?

A. 19-24  
B. 25-35  
C. 45-65  
D. 65-85  
☒ E. 85 and older

23. Less than 35% of the elderly people aged 65 and older, who are not in institutions are functionally limited in some way, according to the Census Bureau.

A. T  
☒ B. F

24. Today, we see unprecedented rates of tooth retention in the elderly population. In 1986, the rate of tooth retention was at 40%. In a study completed in 1990, the rate of tooth retention approached 80%.

☒ A. T  
B. F

25. Although the elderly are the fastest growing segment of our population, they remain the poorest segment of our society.

☒ A. T  
B. F

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26. Although the elderly population accounts for 13% of our population, they currently consume 37% of all prescription medications.

☒ A. T  
B. F

27. Alzheimer's Disease is an age related clinical syndrome characterized by progressive impairments in a wide spectrum of cognitive abilities including memory, language, judgment, and abstract reasoning.

☒ A. T  
B. F

28. Approximately 12% of the population at age 65, and up to 25% of the population at age 80 will be affected by Alzheimer's Disease.

☒ A. T  
B. F

29. There are currently a number of highly effective pharmacologic therapies for Alzheimer's Disease.

☒ A. T  
B. F

30. Treatment efforts in Alzheimer's Disease are generally care oriented, as opposed to cure oriented.

☒ A. T  
B. F

31. It is common practice to describe Alzheimer's Disease in four stages. Those stages are: Early, Middle, Advanced, and Terminal.

☒ A. T  
B. F

32. Characteristics of Early Stage of Alzheimer's Disease include Forgetfulness, Personality Changes, Difficulty with Employment Performance, Social Withdrawal, Apathy, and Neglect of Personal Hygiene.

☒ A. T  
B. F

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33. Characteristics of Middle Stage Alzheimer's Disease include Disorientation, Loss of Coordination, Restlessness, Anxiety, Language Difficulty, and Progressive Memory Loss.

☒ A. T  
B. F



34. Characteristics of Advanced Stage of Alzheimer's Disease include Profound Comprehension Difficulty, Gait Disturbances, Bladder and Bowl Incontinence, Aggression, and Inability to recognize Family Members.

☒ A. T  
B. F

35. Characteristics of Terminal Stage of Alzheimer's Disease include Physical Immobility, Contractures, Dysphagia, Emaciation, Pathological Reflexes, and Total Helplessness.

☒ A. T  
B. F

36. It is not appropriate to involve family members in home care instructions to the Early Stage Alzheimer's patients. This is true because the dental professional always wants to develop independent oral hygiene skills on the part of the patient.

A. T  
☒ B. F

37. When Early Stage Alzheimer's patients present to the dental office for care, the practitioner should immediately begin thinking of developing an aggressive program of oral hygiene.

☒ A. T  
B. F

38. Senile Dementia is a disorder of cognition that affects older patients.

☒ A. T  
B. F

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39. Like Alzheimer's Disease, Senile Dementia is poorly understood neurological disease.

☒ A. T  
B. F

40. There is no definitive diagnostic test that confirms the diagnosis of Senile Dementia.

- ☒ A. T  
B. F

41. The clinical progression of Senile Dementia closely follows the progression of Alzheimer's Disease. There are four stages: Early Middle, Advanced, and Terminal.

- ☒ A. T  
B. F

42. Patients in the early stage of Senile Dementia will often be cooperative for dental care. As the disease progresses, patients tend to become more uncooperative.

- ☒ A. T  
B. F

43. It is very important to understand the progression of the disease process for patients with Alzheimer's Disease and Senile Dementia. This insight will help the dental practitioner to develop an appropriate treatment plan for these patients.

- ☒ A. T  
B. F

44. It is very important for the dental practitioner to understand that patients with Alzheimer's Disease or Senile Dementia will lose their physical coordination with the progression of their disease. This fact must be taken into consideration when designing dental prostheses e.g. the path of insertion of partial dentures.

- ☒ A. T  
B. F

45. Xerostomia is a frequent finding in older patients.

- ☒ A. T  
B. F

46. The retention of some/all dentition from 1990 to 1995 was from

- A. 30% - 35%  
B. 35% - 45%  
C. 40% - 50%  
D. 45% - 60%  
☒ E. 65% - 80%

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47. The percentage of medically compromised patients with hypertension after the age of 65 is:
- A. 21
  - B. 28
  - C. 36
  - D. 41
  - ☒ E. 52
48. Life expectancy is 2005 of females after the age of 65 is:
- A. 11 years
  - B. 16 years
  - ☒ C. 19 years
  - D. 23 years
  - E. 31 years
49. The most common site of cancer occurrence in the female is:
- A. brain
  - B. rectum
  - C. urinary tract/kidneys
  - ☒ D. breast
  - E. lung
50. Doing a graft vestibuloplasty to the maxilla and the mandible the largest amount of tissue can be procured from the:
- A. thigh
  - B. arm
  - C. cheek
  - ☒ D. palate

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